

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application : **09/666,630**
Applicant(s) : **KURAPATI, Kaushal**
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**Title: TELEVISION PROGRAM RECOMMENDER WITH AUTOMATIC
IDENTIFICATION OF CHANGING VIEWER PREFERENCES**

Mail Stop: APPEAL BRIEF - PATENTS
Commissioner for Patents
Alexandria, VA 22313-1450

APPEAL UNDER 37 CFR 41.37

Sir:

This is an appeal from the decision of the Examiner dated 22 March 2007,
finally rejecting claims 1-7, 9-12, 14-22, 24-27, and 29-32 of the subject application.

This paper includes (each beginning on a separate sheet):

- 1. Appeal Brief;**
- 2. Claims Appendix;**
- 3. Evidence Appendix; and**
- 4. Related Proceedings Appendix.**

APPEAL BRIEF

I. REAL PARTY IN INTEREST

The above-identified application is assigned, in its entirety, to **Koninklijke Philips Electronics N. V.**

II. RELATED APPEALS AND INTERFERENCES

Appellant is not aware of any co-pending appeal or interference that will directly affect, or be directly affected by, or have any bearing on, the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-32 are pending in the application.

Claims 8, 13, 23, and 28 would be allowed if rewritten in independent form.

Claims 1-7, 9-12, 14-22, 24-27, and 29-32 stand rejected by the Examiner under 35 U.S.C. 102(b).

These rejected claims are the subject of this appeal.

IV. STATUS OF AMENDMENTS

No amendments were filed subsequent to the final rejection in the Office Action dated 22 March 2007.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The invention addresses a television program recommendation system and method, and particularly, the management and organization of time-dependent viewer preferences. It is well recognized that viewer preferences may vary by time-of-day, day-of-week, season-of-year, and so on, and systems that provide recommendations based on viewer preferences should be cognizant of these dependencies (Applicant's page 6, line 27 – page 7, line 4). Different viewers, however, may have different time-dependencies, and this invention provides

techniques for determining an individual viewer's time-dependent preferences, based on the viewer's viewing history (page 6, lines 11-26).

As time progresses, a viewer's history is continually changing; yet changes in viewing history do not necessarily imply changes of the viewer's preferences. This invention provides techniques for determining how a viewer's preferences change with time based on a potentially dynamically changing viewing history. The applicant teaches (FIG. 4) creating two subsets of the viewer's history and providing each of these subsets to a recommendation system to obtain two sets of recommendations based on these histories (page 4, lines 13-20). If the recommendations from the two different sets of history are similar, the implication is that the viewer's preferences have not changed, even though the particular shows that were viewed differed. If, on the other hand, the recommendations from the two different sets of history are dissimilar, the implication is that the viewer's preferences were different for each of these sets (page 4, lines 21-28). By identifying distinguishable changes in the viewer's preferences based on different sets of viewing history, time-dependencies, and other dependencies, can be identified (page 3, lines 25-29). Additionally, if two sets of histories provide the same set of recommendations, one of the sets can be considered redundant, and deleted without impact (page 4, lines 5-10).

Independent claim 1 recites a method (FIG. 4) for identifying changes in television viewing preferences of an individual, comprising the steps of:

- obtaining a viewing history indicating a set of programs that have been watched by a user;

- establishing at least two viewing history sub-sets, VH_1 and VH_K , from said viewing history (420; page 10, lines 11-12);

- generating a corresponding set of program recommendation scores, S_1 and S_K , for a set of programs in a given time interval based on said at least two viewing history sub-sets, VH_1 and VH_K (430-440; page 10, lines 13-18), and

comparing said sets of program recommendation scores, S_1 and S_K based on respective viewing history sub-sets (450), to identify a change in said viewer preferences (470; page 10, lines 25-29).

Independent claim 11 recites a method (FIG. 4) for managing the storage of a viewer history in a television program recommender, comprising the steps of:

obtaining a viewing history indicating a set of programs that have been watched by a user;

establishing at least two viewing history sub-sets, VH_1 and VH_K , from said viewing history (420; page 10, lines 11-12);

generating viewer profiles, P_1 and P_K , corresponding to said at least two sub-sets, VH_1 and VH_K (430; page 10, lines 13-14);

generating a corresponding set of program recommendation scores, S_1 and S_K , for a set of programs in a given time interval based on said viewer profiles, P_1 and P_K (440; page 10, lines 15-18);

comparing said sets of program recommendation scores, S_1 and S_K , to identify a change in said viewer preferences (450; page 10, lines 18-20); and

deleting a portion of said viewing history if said sets of program recommendation scores, S_1 and S_K are substantially similar (460; 10, lines 20-24).

Independent claim 16 recites a system for identifying changes in television viewing preferences of an individual, comprising:

a memory for storing computer readable code; and

a processor (100 of FIG. 1) operatively coupled to said memory, said processor configured to:

obtain a viewing history (200 of FIG. 1) indicating a set of programs that have been watched by a user (page 7, lines 12-19);

establish at least two viewing history sub-sets, VH_1 and VH_K , from said viewing history (FIG. 2; page 8, lines 10-25);

generate a corresponding set of program recommendation scores, S_1 and S_K , for a set of programs in a given time interval based on said at least two viewing history sub-sets, VH_1 and VH_K (FIG. 2; page 8, lines 26-33); and

compare said sets of program recommendation scores, S_1 and S_K based on respective viewing history sub-sets, to identify a change in said viewer preferences (page 9, lines 1-18).

Independent claim 26 recites a system for managing the storage of a viewer history in a television program recommender, comprising:

a memory for storing computer readable code; and

a processor (100 of FIG. 1) operatively coupled to said memory, said processor configured to:

obtain a viewing history (200 of FIG. 1) indicating a set of programs that have been watched by a user (page 7, lines 12-19);

establish at least two viewing history sub-sets, VH_1 and VH_K , from said viewing history (FIG. 2; page 8, lines 10-25);

generate viewer profiles, P_1 and P_K , corresponding to said at least two viewing history sub-sets, VH_1 and VH_K (FIG. 2; page 8, lines 26-33);

generate a corresponding set of program recommendation scores, S_1 and S_K , for a set of programs in a given time interval based on said viewer profiles, P_1 and P_K (FIG. 2; page 8, lines 26-33);

compare said sets of program recommendation scores, S_1 and S_K , to identify a change in said viewer preferences (page 9, lines 1-3); and

delete a portion of said viewing history if said sets of program recommendation scores, S_1 and S_K are substantially similar (page 9, lines 3-8).

Independent claim 31 recites an article of manufacture for identifying changes in television viewing preferences of an individual, comprising:

a computer readable medium having computer readable code means embodied thereon, said computer readable program code means comprising (FIG. 4):

a step to obtain a viewing history indicating a set of programs that have been watched by a user (200 of FIG. 1);

a step to establish at least two viewing history sub-sets, VH_1 and VH_K , from said viewing history (420; page 10, lines 11-14);

a step to generate a corresponding set of program recommendation scores, S_1 and S_K , for a set of programs in a given time interval based on said at least two viewing history sub-sets, VH_1 and VH_K (430-440; page 10, lines 15-18); and

a step to compare said sets of program recommendation scores, S_1 and S_K based on respective viewing history sub-sets, to identify a change in said viewer preferences (450; page 10, lines 18-27).

Independent claim 32 recites an article of manufacture for managing the storage of a viewer history in a television program recommender, comprising:

a computer readable medium having computer readable code means embodied thereon, said computer readable program code means comprising:

a step to obtain a viewing history indicating a set of programs that have been watched by a user (200 of FIG. 1);

a step to establish at least two viewing history sub-sets, VH_1 and VH_K , from said viewing history (420; page 10, lines 11-14);

a step to generate viewer profiles, P_1 and P_K , corresponding to said at least two viewing history sub-sets, VH_1 and VH_K (430; page 10, lines 11-14);

a step to generate a corresponding set of program recommendation scores, S_1 and S_K , for a set of programs in a given time interval based on said viewer profiles, P_1 and P_K (440; page 10, lines 15-18);

a step to compare said sets of program recommendation scores, S_1 and S_K , to identify a change in said viewer preferences (450, page 10, lines 18-20); and

a step to delete a portion of said viewing history if said sets of program recommendation scores, S_1 and S_K , are substantially similar (460, page 10, lines 20-24).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1-7, 9-12, 14-22, 24-27, and 29-32 stand rejected under 35 U.S.C. 102(b) over Bedard (USP 5,801,747).

VII. ARGUMENT

**Claims 1-7, 9-12, 14-22, 24-27, and 29-32 stand rejected
under 35 U.S.C. 102(b) over Bedard.**

MPEP 2131 states:

"A claim is anticipated only if ***each and every element*** as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The ***identical invention*** must be shown in as ***complete detail*** as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Claims 1-7 and 9-10

Claim 1, upon which claims 2-10 depend, claims a method that includes generating a set of program recommendation scores (S_1 , S_K) for a set of programs based on at least two viewing history sub-sets, (VH_1 , VH_K) and comparing the sets of program recommendation scores (S_1 , S_K) to identify a change in the viewer preferences.

Bedard does not teach generating a set of program recommendation scores for a set of programs based on at least two viewing history sub-sets, and Bedard

does not teach comparing sets of program recommendation scores to identify a change in the viewer preferences.

Bedard teaches a technique for updating a user's viewing history in an ordered manner based on the amount of time a user spends viewing each selection, and based on the category/subcategory of the program being presented on the channel. Bedard's history includes a matrix of channels and categories, and Bedard's process continually updates the amount of time each channel's category is viewed; a new channel is added to the matrix by removing an older channel with less viewing time.

The Office action asserts that Bedard teaches generating a set of program recommendation scores for a set of programs based on the at least two viewing history sub-sets "by the category/subcategory viewing units as shown in Fig. 2 (see column 4, line 27 – column 6, line 62), wherein the type of category/subcategory in the viewer profile array corresponds to a first viewing history subset and the new entry, the currently viewed channel and type of category/subcategory not existing in the viewer profile array, corresponds to a second viewing history subset" (Office action, page 4, lines 4-8). The applicant respectfully disagrees with this assertion.

The applicant acknowledges that the new currently viewed channel may be considered a viewing history subset, albeit a short history subset, but respectfully notes that Bedard does not teach generating a set of program recommendation scores based on this single-entry 'viewing history' subset.

Nowhere in the extensive cited text does Bedard teach generating a set of program recommendation scores based on a set of viewing history sub-sets. However, assuming, *in argument*, that Bedard can be said to teach generating a set of program recommendation scores for a set of programs based on respective viewing history sub-sets, as asserted in the Office action, the applicant respectfully notes that Bedard clearly does not teach comparing sets of program recommendation scores to identify a change in viewer preferences, as specifically claimed in claim 1.

The Office action asserts that Bedard teaches comparing sets of program recommendation scores to identify a change in the viewer preferences at 'columns 5-6' "wherein the system compares the first set of scores to the second set of scores in

order to determine whether a new entry should be added to the viewer profile upon identifying a change in user preferences" (Office action, page 4, lines 16-18). The applicant respectfully disagrees with this assertion, and notes that the Office action fails to specifically identify where, within the two columns of cited text, Bedard teaches comparing two sets of program recommendation scores.

As noted above, Bedard does not refer to sets of program recommendation scores based on sets of viewing history, and nowhere in the cited text is there a reference to a comparison of two sets of program recommendation scores, and nowhere in the cited text is there an identification of a change in a viewer's preference based on such a comparison.

Bedard updates the user's preferences continuously, based on the currently viewed program. Bedard uses a running weighted average to dampen the effects of newly viewed programs, and by doing so, obviates the need to ever compare one set of recommendations to another. The Office action's interpretation of Bedard obviates the need for any of the elements in the applicant's claimed method beyond determining program recommendations based on a viewing history, and, most significantly, the Office action's basis of rejection fails to address the specific elements of the applicant's claimed method beyond determining these program recommendations. There is no need, or suggestion, in Bedard to generate sets of program recommendations based on different sets of histories, nor to compare these sets of recommendations to determine whether the user's preferences have changed.

The Board of Patent Appeals and Interferences has consistently upheld the principle that the burden of establishing a prima facie case resides with the Office, and to meet this burden, the Examiner must specifically identify where each of the claimed elements are found in the prior art (see, for example, *Ex Parte Naoya Isoda*, Appeal No. 2005-2289, Application 10/064,508 (BPAI Opinion October 2005)). The Office action has failed to identify where the claimed limitation of generating a corresponding set of program recommendation scores for a set of programs in a

given time interval based on at least two viewing history sub-sets can be found in Bedard, and has failed to identify where the claimed limitation of comparing sets of program recommendation scores to identify a change in viewer preferences is also found in Bedard, and thus has failed to establish a prima facie case.

Because Bedard fails to teach or suggest each of the limitations of claim 1, and the Office action fails to identify where Bedard provides these teachings, the applicant respectfully maintains that the rejection of claims 1-7 and 9-10 under 35 U.S.C. 102(b) over Bedard is unfounded, per MPEP 2131.

Claims 11-12 and 14-15

Claim 11, upon which claims 12-15 depend, claims a method that includes generating viewer profiles corresponding to history sub-sets, generating a corresponding set of program recommendation scores for a set of programs in a given time interval based on the viewer profiles, comparing the sets of program recommendation scores to identify a change in viewer preferences, and deleting a portion of the viewing history if the sets of program recommendation scores are substantially similar.

As noted above, Bedard fails to teach or suggest generating a corresponding set of program recommendation scores for a set of programs in a given time interval based on viewer profiles, and fails to teach or suggest comparing sets of program recommendation scores to identify a change in viewer preferences, and the Office action fails to identify where Bedard provides these teachings.

Further, Bedard fails to teach deleting a portion of the viewing history if sets of program recommendation scores are substantially similar. The Office action asserts that Bedard provides this teaching at column 5, lines 44-48 and 59-60. At the cited text, Bedard merely teaches that older selections may be replaced by newer selections. As noted above, Bedard teaches deleting an older selection based on the viewing time associated with the selection; the viewing times of each older selection is decremented until one of the older selection's viewing time is decremented to zero (318 in Bedard's loop 316-324). Bedard's deletion criteria is completely independent

of a similarity of program recommendation scores. Even assuming in argument that Bedard's viewing times correspond to the claimed recommendation scores, Bedard teaches deleting the selection when the viewing time is decremented to zero, independent of whether this viewing time is similar to any other selection's viewing time.

Because Bedard fails to teach or suggest generating sets of program recommendation scores for a set of programs in a given time interval based on viewer profiles, fails to teach or suggest comparing the sets of program recommendation scores to identify a change in viewer preferences, and fails to teach deleting a portion of a viewing history if the sets of program recommendation scores are substantially similar, the applicant respectfully maintains that the rejection of claims 11-12 and 14-15 under 35 U.S.C. 102(b) over Bedard is unfounded, per MPEP 2131.

Claims 16-22 and 24-25

Claim 16, upon which claims 17-25 depend, claims a system that includes a processor that is configured to generate a corresponding set of program recommendation scores for a set of programs in a given time interval based on at least two viewing history sub-sets, and compare the sets of program recommendation scores to identify a change in viewer preferences.

As noted above with regard to claim 1, Bedard fails to teach generating a corresponding set of program recommendation scores for a set of programs in a given time interval based on at least two viewing history sub-sets, and fails to teach or suggest comparing the sets of program recommendation scores to identify a change in viewer preferences. As such, the applicant respectfully maintains that the rejection of claims 16-22 and 24-25 under 35 U.S.C. 102(b) over Bedard is unfounded, per MPEP 2131.

Claims 26-27 and 29-30

Claim 26, upon which claims 27-30 depend, claims a system that includes a processor that is configured to generate viewer profiles corresponding to at least two viewing history sub-sets, generate a corresponding set of program recommendation scores for a set of programs based on the viewer profiles, compare the sets of program recommendation scores to identify a change in viewer preferences, and delete a portion of the viewing history if the sets of program recommendation scores are substantially similar.

As discussed above with regard to claim 11, Bedard fails to teach or suggest generating sets of program recommendation scores for a set of programs based on viewer profiles, fails to teach or suggest comparing sets of program recommendation scores to identify a change in viewer preferences, and fails to teach or suggest deleting a portion of the viewing history if the sets of program recommendation scores are substantially similar. As such, the applicant respectfully maintains that the rejection of claims 26-27 and 29-30 under 35 U.S.C. 102(b) over Bedard is unfounded, per MPEP 2131.

Claim 31

Claim 31 claims an article of manufacture that includes computer readable program code that is configured to generate sets of program recommendation scores for a set of programs based on at least two history sub-sets and compare the sets of program recommendation scores to identify a change in viewer preferences.

As discussed above with regard to claim 1, Bedard fails to teach generating sets of program recommendation scores for a set of programs based on at least two history sub-sets, and fails to teach or suggest comparing sets of program recommendation scores to identify a change in viewer preferences. As such, the applicant respectfully maintains that the rejection of claim 31 under 35 U.S.C. 102(b) over Bedard is unfounded, per MPEP 2131.

Claim 32

Claim 32 claims an article of manufacture that includes computer readable program code that is configured to generate sets of program recommendation scores for a set of programs based on viewer profiles, compare the sets of program recommendation scores to identify a change in viewer preferences, and delete a portion of a viewing history if the sets of program recommendation scores are substantially similar.

As discussed above with regard to claim 11, Bedard fails to teach generating sets of program recommendation scores for a set of programs based on viewer profiles, fails to teach or suggest comparing sets of program recommendation scores to identify a change in viewer preferences, and fails to teach or suggest deleting a portion of a viewing history if sets of program recommendation scores are substantially similar. As such, the applicant respectfully maintains that the rejection of claim 32 under 35 U.S.C. 102(b) over Bedard is unfounded, per MPEP 2131.

CONCLUSIONS

Because Bedard fails to teach generating sets of program recommendation scores for a set of programs based on viewer profiles, and fails to teach or suggest comparing sets of program recommendation scores to identify a change in viewer preferences, the applicant respectfully requests that the Examiner's rejection of claims 1-7, 9-12, 14-22, 24-27, and 29-32 under 35 U.S.C. 102(b) over Bedard be reversed by the Board, and the claims be allowed to pass to issue.

Because Bedard fails to teach or suggest deleting a portion of a viewing history if sets of program recommendation scores are substantially similar, the applicant respectfully requests that the Examiner's rejection of claims 11-12, 14-15, 26-27, 29-30, and 32 under 35 U.S.C. 102(b) over Bedard be reversed by the Board, and the claims be allowed to pass to issue.

Respectfully submitted

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CLAIMS APPENDIX

1. A method for identifying changes in television viewing preferences of an individual, comprising the steps of:

obtaining a viewing history indicating a set of programs that have been watched by a user;

establishing at least two viewing history sub-sets, VH_1 and VH_K , from said viewing history;

generating a corresponding set of program recommendation scores, S_1 and S_K , for a set of programs in a given time interval based on said at least two viewing history sub-sets, VH_1 and VH_K ; and

comparing said sets of program recommendation scores, S_1 and S_K based on respective viewing history sub-sets, to identify a change in said viewer preferences.

2. The method of claim 1, wherein said comparing step further comprises the step of comparing the top-N (where N is a positive integer) recommended television programs in each set, S_1 and S_K .

3. The method of claim 1, further comprising the step of generating viewer profiles, P_1 and P_K , corresponding to said at least two viewing history sub-sets, VH_1 and VH_K .

4. The method of claim 1, further comprising the step of presenting a user with a set of recommended programs based on one or both of said sets of programs, S_1 and S_K .

5. The method of claim 1, further comprising the step of presenting a user with a union set of recommended programs based on said sets of programs, S_1 and S_K .

6. The method of claim 1, further comprising the step of presenting a user with an intersection set of recommended programs based on said sets of programs, S_1 and S_K .

7. The method of claim 1, further comprising the step of presenting a user with a set of recommended programs, S_K , based on a more recent sub-set of said viewing history.

8. The method of claim 1, wherein said at least two viewing history sub-sets, VH_1 and VH_K , from said viewing history are obtained by uniformly randomly sampling sub-sets of television programs from said viewing history.

9. The method of claim 1, wherein said at least two viewing history sub-sets, VH_1 and VH_K , from said viewing history are obtained by selecting a time span that is less than the entire time period covered by the viewing history.

10. The method of claim 9, wherein said selected time span is an earlier similar time period to a given time interval.

11. A method for managing the storage of a viewer history in a television program recommender, comprising the steps of:

obtaining a viewing history indicating a set of programs that have been watched by a user;

establishing at least two viewing history sub-sets, VH_1 and VH_K , from said viewing history;

generating viewer profiles, P_1 and P_K , corresponding to said at least two sub-sets, VH_1 and VH_K ;

generating a corresponding set of program recommendation scores, S_1 and S_K , for a set of programs in a given time interval based on said viewer profiles, P_1 and P_K ;

comparing said sets of program recommendation scores, S_1 and S_K , to identify a change in said viewer preferences; and

deleting a portion of said viewing history if said sets of program recommendation scores, S_1 and S_K are substantially similar.

12. The method of claim 11, wherein said comparing step further comprises the step of comparing the top-N (where N is a positive integer) recommended television programs in each set, S_1 and S_K .

13. The method of claim 11, wherein said at least two viewing history sub-sets, VH_1 and VH_K , from said viewing history are obtained by uniformly randomly sampling sub-sets of television programs from said viewing history.

14. The method of claim 11, wherein said at least two viewing history sub-sets, VH_1 and VH_K , from said viewing history are obtained by selecting a time span that is less than the entire time period covered by the viewing history.

15. The method of claim 14, wherein said selected time span is an earlier similar time period to a given time interval.

16. A system for identifying changes in television viewing preferences of an individual, comprising:

a memory for storing computer readable code; and

a processor operatively coupled to said memory, said processor configured to:

obtain a viewing history indicating a set of programs that have been watched by a user;

establish at least two viewing history sub-sets, VH_1 and VH_K , from said viewing history;

generate a corresponding set of program recommendation scores, S_1 and S_K , for a set of programs in a given time interval based on said at least two viewing history sub-sets, VH_1 and VH_K ; and

compare said sets of program recommendation scores, S_1 and S_K based on respective viewing history sub-sets, to identify a change in said viewer preferences.

17. The system of claim 16, wherein said processor compares the top-N (where N is a positive integer) recommended television programs in each set, S_1 and S_K .

18. The system of claim 16, wherein said processor is further configured to generate viewer profiles, P_1 and P_K , corresponding to said at least two viewing history sub-sets, VH_1 and VH_K .

19. The system of claim 16, wherein said processor is further configured to present a user with a set of recommended programs based on one or both of said sets of programs, S_1 and S_K .

20. The system of claim 16, wherein said processor is further configured to present a user with a union set of recommended programs based on said sets of programs, S_1 and S_K .

21. The system of claim 16, wherein said processor is further configured to present a user with an intersection set of recommended programs based on said sets of programs, S_1 and S_K .

22. The system of claim 16, wherein said processor is further configured to present a user with a set of recommended programs, S_K , based on a more recent sub-set of said viewing history.

23. The system of claim 16, wherein said at least two viewing history sub-sets, VH_1 and VH_K , from said viewing history are obtained by uniformly randomly sampling sub-sets of television programs from said viewing history.

24. The system of claim 16, wherein said at least two viewing history sub-sets, VH_1 and VH_K , from said viewing history are obtained by selecting a time span that is less than the entire time period covered by the viewing history.

25. The system of claim 24, wherein said selected time span is an earlier similar time period to a given time interval.

26. A system for managing the storage of a viewer history in a television program recommender, comprising:

- a memory for storing computer readable code; and

- a processor operatively coupled to said memory, said processor configured to:

- obtain a viewing history indicating a set of programs that have been watched by a user;

- establish at least two viewing history sub-sets, VH_1 and VH_K , from said viewing history;

- generate viewer profiles, P_1 and P_K , corresponding to said at least two viewing history sub-sets, VH_1 and VH_K ;

- generate a corresponding set of program recommendation scores, S_1 and S_K , for a set of programs in a given time interval based on said viewer profiles, P_1 and P_K ;

- compare said sets of program recommendation scores, S_1 and S_K , to identify a change in said viewer preferences; and

- delete a portion of said viewing history if said sets of program recommendation scores, S_1 and S_K are substantially similar.

27. The system of claim 26, wherein said processor compares the top-N (where N is a positive integer) recommended television programs in each set, S_1 and S_K .

28. The system of claim 26, wherein said at least two viewing history sub-sets, VH_1 and VH_K , from said viewing history are obtained by uniformly randomly sampling sub-sets of television programs from said viewing history.

29. The system of claim 26, wherein said at least two viewing history sub-sets, VH_1 and VH_K , from said viewing history are obtained by selecting a time span that is less than the entire time period covered by the viewing history.

30. The system of claim 29, wherein said selected time span is an earlier similar time period to a given time interval.

31. An article of manufacture for identifying changes in television viewing preferences of an individual, comprising:

 a computer readable medium having computer readable code means embodied thereon, said computer readable program code means comprising:

 a step to obtain a viewing history indicating a set of programs that have been watched by a user;

 a step to establish at least two viewing history sub-sets, VH_1 and VH_K , from said viewing history;

 a step to generate a corresponding set of program recommendation scores, S_1 and S_K , for a set of programs in a given time interval based on said at least two viewing history sub-sets, VH_1 and VH_K ; and

 a step to compare said sets of program recommendation scores, S_1 and S_K based on respective viewing history sub-sets, to identify a change in said viewer preferences.

32. An article of manufacture for managing the storage of a viewer history in a television program recommender, comprising:

a computer readable medium having computer readable code means embodied thereon, said computer readable program code means comprising:

a step to obtain a viewing history indicating a set of programs that have been watched by a user;

a step to establish at least two viewing history sub-sets, VH_1 and VH_K , from said viewing history;

a step to generate viewer profiles, P_1 and P_K , corresponding to said at least two viewing history sub-sets, VH_1 and VH_K ;

a step to generate a corresponding set of program recommendation scores, S_1 and S_K , for a set of programs in a given time interval based on said viewer profiles, P_1 and P_K ;

a step to compare said sets of program recommendation scores, S_1 and S_K , to identify a change in said viewer preferences; and

a step to delete a portion of said viewing history if said sets of program recommendation scores, S_1 and S_K are substantially similar.

EVIDENCE APPENDIX

No evidence has been submitted that is relied upon by the appellant in this appeal.

RELATED PROCEEDINGS APPENDIX

Appellant is not aware of any co-pending appeal or interference which will directly affect or be directly affected by or have any bearing on the Board's decision in the pending appeal.